Oral Thrush

Oral thrush is an infection in the mouth caused by a yeast germ called *Candida*. It is not usually serious and can generally be cleared with treatment.

What is oral thrush?

Thrush is an infection caused by a yeast germ called *Candida*. The mouth is a common site where *Candida* causes infection. Candidal infection in the mouth is called oral thrush. Other common sites for thrush to develop are the vagina, nappy area, and nail folds. (See separate leaflets called *Vaginal Thrush*, *Candidal Skin Infection* and *Nappy Rash* for more details about these other types of thrush.)

Who develops oral thrush?

Small numbers of *Candida* commonly live on healthy skin and in a healthy mouth. They are usually harmless. Healthy people do not normally develop oral thrush. However, certain situations or conditions may cause an overgrowth of *Candida* which can lead to a bout of oral thrush. These include:

- **Being a baby.** Oral thrush is quite common in young babies.
- **Wearing dentures,** especially if they are not taken out at night, not kept clean, or do not fit well and rub on the gums.
- **A course of antibiotic medicine.** Antibiotics will kill harmless germs (bacteria) which live in the mouth. They do not kill *Candida* which may multiply more easily if there are fewer bacteria around.
- **Excessive use of antibacterial mouthwash** (for similar reasons to above).
- **Taking steroid tablets or inhalers.**
- **Having a dry mouth** due to a lack of saliva. This may occur as a side-effect from certain medicines (such as antidepressants, antipsychotics, chemotherapy medicines), following radiotherapy to the head or neck, or as a symptom of *Sjögren's syndrome*.
- **Having diabetes.**
- **Having severe anaemia.**
- **Lacking iron, folate or vitamin B12.**
- **Having a poor immune system.** For example, if you are taking medicines that suppress your immune system, if you have certain cancers, or if you have HIV/AIDS.
- **Being frail or in generally poor health.**
- **Smoking.** Smokers are more likely to develop oral thrush.

Oral thrush is not contagious. You cannot pass on oral thrush to other people.

What are the symptoms of oral thrush?

- **The classical symptom is white spots that develop in your mouth.** The spots may join together to form larger spots called plaques. They may become yellow or grey. If you wipe off a spot, the underlying tissue may be red but it is not usually sore or painful.
- **Often there are no white spots. Areas in your mouth may just become red and sore.** This more typically occurs if you develop thrush after taking antibiotics or steroids.
- **Denture wearers may develop an area of persistent redness under a denture.**
- **You may develop sore, cracked, red areas just outside your mouth.** This mainly affects the angle where the upper and lower lips meet (angular stomatitis).
- **Some mild oral thrush infections are painless.** However, sometimes oral thrush is quite sore and can make eating and drinking uncomfortable. Some babies with oral thrush may drool saliva, or not be able to feed properly because of soreness.
How is oral thrush diagnosed?

Your doctor will usually diagnose oral thrush by your typical symptoms and the typical appearance in your mouth. No investigations are usually needed to diagnose oral thrush.

However, your doctor may sometimes suggest a blood test to look for certain conditions that may make you more likely to develop oral thrush. For example, a blood test to see if you are lacking iron, vitamin B12 or folate.

If oral thrush does not respond to treatment (see below), your doctor may suggest that they take a sample (swab) from inside your mouth. The swab is then sent to the laboratory to be examined under a microscope. They can also try to grow the *Candida* in the laboratory.

Occasionally, a biopsy is needed to confirm a diagnosis of oral thrush. A small sample is taken from the white patches inside your mouth and this can be examined under a microscope.

What is the treatment for oral thrush?

**Locally applied treatment**

For mild oral thrush, the usual treatment that is tried first is miconazole mouth gel for seven days. Sometimes a two-week course is needed. Nystatin drops are another option if miconazole gel cannot be used (for example, if you are known to be allergic to it).

Follow the instructions in the packet:

- The gel or drops should be used after you have eaten or drunk.
- Smear a small amount of gel on to the affected areas, with a clean finger, four times a day.
- With the drops, you use a dropper to place the liquid inside your mouth on to the affected areas four times a day.
- Ideally, you should not eat or drink for about 30 minutes after using either the gel or the drops. This helps to prevent the medicine from being washed out of your mouth too soon.

**Anti-thrush tablets**

Tablets that contain a medicine called fluconazole can also help to clear fungal and thrush infections from the body. Tablets tend to be used in more severe or serious cases. For example, for people with a poor immune system who develop extensive oral thrush. Tablets are usually prescribed for seven days and this will usually clear oral thrush.

**Adjustment of other medication**

If you are taking other medication that may have caused oral thrush, such as steroids or antibiotics, your doctor may need to change this medication or reduce the dose to help clear up your thrush.

**Referral to a specialist**

Your doctor may suggest that he or she refer you to (or ask the advice of) a specialist if:

- The above measures do not help to clear your oral thrush infection.
- You have particularly severe infection or other health problems (for example, you are undergoing chemotherapy or are taking other medicines that weaken your immune system).

The specialist may suggest other treatments for oral thrush. For example, medicines such as itraconazole, ketoconazole or amphotericin.
Can oral thrush be prevented?

It may be possible to alter one or more of the situations mentioned above to help prevent further bouts of oral thrush. For example:

- If you have diabetes - good control of your blood sugar level reduces the risk of thrush and other infections.
- If you use steroid inhalers - having a good inhaler technique and using a spacer device may reduce the risk of thrush. Also, rinse your mouth after using the inhaler, to help remove any medicine particles left in your mouth. Ask your doctor about reducing your dose of steroid in your inhaler to the lowest level needed to control your asthma.
- If you wear dentures:
  - Leave your dentures out overnight, or for at least six hours daily. Constant wearing of dentures, and not taking them out at night, is thought to be one of the most common causes of oral thrush.
  - Clean and disinfect dentures daily. To clean, use soapy water and scrub the dentures with a soft nailbrush on the fitting surface - that is, the non-polished side. Then soak them in a disinfecting solution. The type of solution and the time they should be soaked for will be advised by your dentist. Rinse the dentures after disinfecting them, and then allow the dentures to air dry before wearing them again. Drying like this helps to kill any Candida that might be stuck to the dentures.
  - Clean the inside of your mouth (where the dentures sit) with a soft brush.
  - See a dentist if the dentures do not fit well.
- If you take medication which causes a dry mouth - take frequent sips of water. (See separate leaflet called Dry Mouth for more details.)
- Tips to prevent oral thrush in babies are included in the separate leaflet called Oral Thrush in Babies.
- If you are found to have anaemia or low levels of vitamin B12, folate or iron, treating this may help to prevent oral thrush in the future.
- If you are a smoker, quitting smoking may help to prevent further bouts of oral thrush. (See separate leaflet called Tips to Help You Stop Smoking for more details.)
- Certain groups of people may be given anti-thrush tablets to help to prevent oral thrush. For example, people who are on medication to suppress their immune system or who are receiving chemotherapy for cancer.

Further reading & references

- Candida - oral; NICE CKS, July 2013 (UK access only)

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